

In the Claims:

1. (Original) A method for detecting the presence or amount of one or more analytes, comprising:
 - associating a first electrolyte solution containing at least one analyte with a first compartment comprising a first electrode and a second electrode;
 - associating a light emitting source with a second compartment comprising a third electrode and a fourth electrode;
 - electronically coupling the first and third electrodes;
 - causing a potential difference between the second and fourth electrodes; and
 - detecting light emitted from the light emitting source in the second compartment, thereby indicating the presence or amount of the at least one analyte in the first compartment.
2. (Original) The method of Claim 1, wherein the light emitting source comprises an electrochemiluminescent (ECL) system.
3. (Original) The method of Claim 1, wherein the light emitting source is a light-emitting diode.
4. (Original) The method of Claim 3, wherein the light-emitting diode is a semiconductor light-emitting diode.
5. (Original) The method of Claim 3, wherein the light-emitting diode emits visible light.
6. (Original) The method of Claim 1, wherein the first electrode and third electrode comprise one monolithic bipolar electrode.

7. (Original) The method of Claim 1, further comprising:
associating a plurality of first electrodes with the first compartment;
associating a plurality of third electrodes with the second compartment;
associating a plurality of light emitting sources with the second compartment;
electronically coupling respective first and third electrodes; and
detecting light emitted from each light emitting source in the second compartment.
8. (Original) The method of Claim 7, wherein the plurality of light emitting sources are light-emitting diodes.
9. (Original) The method of Claim 7, wherein the second electrode is a cathode and the fourth electrode is an anode.
10. (Original) The method of Claim 7, wherein the second electrode is an anode and the fourth electrode is a cathode.
11. (Withdrawn)
12. (Withdrawn)
13. (Withdrawn)
14. (Withdrawn)
15. (Withdrawn)
16. (Withdrawn)
17. (Withdrawn)
18. (Withdrawn)
19. (Withdrawn)

20. (Original) A system for detecting the presence or amount of one or more analytes, comprising:

- a first compartment comprising a first electrode and a second electrode;
- a first electrolyte solution containing at least one analyte associated with the first compartment;
- a second compartment comprising a third electrode and a fourth electrode;
- a light emitting source associated with the second compartment;
- a conductor electronically coupling the first and third electrodes;
- a voltage source operable to generate a potential difference between the second and fourth electrodes; and
- a detector operable to detect light emitted from the light emitting source in the second compartment, thereby indicating the presence or amount of the at least one analyte in the first compartment.

21. (Original) The system of Claim 20, wherein the light emitting source comprises an electrochemiluminescent (ECL) system.

22. (Original) The system of Claim 20, wherein the light emitting source is a light-emitting diode.

23. (Original) The system of Claim 22, wherein the light-emitting diode is a semiconductor light-emitting diode.

24. (Original) The system of Claim 22, wherein the light-emitting diode emits visible light.

25. (Original) The system of Claim 20, wherein the first electrode and third electrode comprise one monolithic bipolar electrode.

26. (Original) The system of Claim 20, wherein:
the first compartment comprises a plurality of first electrodes;
the second compartment comprises a plurality of third electrodes;
the light emitting sources comprises a plurality of light emitting sources associated with the second compartment;
the conductor comprises a plurality of conductors electronically coupling respective first and third electrodes; and
the detector is operable to detect light emitted from each light emitting source in the second compartment.

27. (Original) The system of Claim 26, wherein the plurality of light emitting sources are light-emitting diodes.

28. (Original) The system of Claim 26, wherein the second electrode is a cathode and the fourth electrode is an anode.

29. (Original) The system of Claim 26, wherein the second electrode is an anode and the fourth electrode is a cathode.

30. (Withdrawn)

31. (Withdrawn)

32. (Withdrawn)

33. (Withdrawn)

34. (Withdrawn)

35. (Withdrawn)

36. (Withdrawn)

- 37. (Withdrawn)
- 38. (Withdrawn)
- 39. (Withdrawn)
- 40. (Withdrawn)
- 41. (Withdrawn)
- 42. (Withdrawn)
- 43. (Withdrawn)
- 44. (Withdrawn)